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|-------------------------------|------------------------|---------------------|--|
| Notice of Allowability | Application No. | Applicant(s) | |
| | 09/871,476 | SREEDHAR MUKKAMALLA | |
| | Examiner | Art Unit | |
| | Miranda Le | 2167 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to Amendment filed 10/14/05.
2. ☒ The allowed claim(s) is/are 1, 3-5, 8-9, 12-13, 15-17, 20-21, 24, 27-28, now renumbered as 1-16.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.

THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|--|
| 1. <input type="checkbox"/> Notice of References Cited (PTO-892) | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 6. <input type="checkbox"/> Interview Summary (PTO-413), Paper No./Mail Date _____. |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08), Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit of Biological Material | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance |
| | 9. <input type="checkbox"/> Other _____. |

Miranda Le
December 22, 2003

EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Applicant's representative, Mr. Marcel K. Bingham, on December 19, 2005.

The application has been amended as follows:

In the drawings:

The following changes to the drawings have been approved by the examiner and agreed upon by applicant: See the attachment of Fig. 2. In order to avoid abandonment of the application, applicant must make these above agreed upon drawing changes.

INFORMATION ON HOW TO EFFECT DRAWING CHANGES

Replacement Drawing Sheets

Drawing changes must be made by presenting replacement sheets which incorporate the desired changes and which comply with 37 CFR 1.84. An explanation of the changes made must be presented either in the drawing amendments section, or remarks, section of the amendment paper. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). A replacement sheet must include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of the amended drawing(s) must not be labeled as "amended." If the changes to the drawing figure(s) are not accepted by the examiner, applicant will be notified of any required corrective action in the next Office action. No further drawing submission will be required, unless applicant is notified.

Identifying indicia, if provided, should include the title of the invention, inventor's name, and application number, or docket number (if any) if an application number has not been assigned to the application. If this information is provided, it must be placed on the front of each sheet and within the top margin.

Annotated Drawing Sheets

A marked-up copy of any amended drawing figure, including annotations indicating the changes made, may be submitted or required by the examiner. The annotated drawing sheet(s) must be clearly labeled as "Annotated Sheet" and must be presented in the amendment or remarks section that explains the change(s) to the drawings.

Timing of Corrections

Applicant is required to submit acceptable corrected drawings within the time period set in the Office action. See 37 CFR 1.85(a). Failure to take corrective action within the set period will result in ABANDONMENT of the application.

If corrected drawings are required in a Notice of Allowability (PTOL-37), the new drawings MUST be filed within the THREE MONTH shortened statutory period set for reply in the "Notice of Allowability." Extensions of time may NOT be obtained under the provisions of 37 CFR 1.136 for filing the corrected drawings after the mailing of a Notice of Allowability.

In the claims:

1. (Currently Amended) A method for database systems to access data from other database systems, the method comprising the steps of:
 - a first database system directly storing first database records in first data blocks having a first data block size;
 - concurrently with said first database system directly storing first database records in first data blocks having a first data block size, said first database system directly accessing a copy of second data blocks in which a second database system directly stored second database records;
 - said second data blocks having at least one data block with a second data block size different than said first data block size; and

wherein each block of said first data blocks and of said second data blocks is an atomic unit of storage space allocated within a file to store one or more records of a database;

the first database system generating metadata that specifies a plurality of block sizes for data blocks directly accessible to said first database system;

wherein said metadata defines tablespaces and specifies for each tablespace of said tablespaces a particular data block size for data blocks in said tablespace;

integrating said copy of said second data blocks within said first database system as at least one tablespace that includes said copy of said second data blocks; and

wherein the step of integrating includes modifying said metadata to reflect said second data block size for said at least one tablespace.

2. (Canceled)
3. (Original) The method of Claim 1, wherein the step of accessing a copy of second data blocks includes storing user data in said copy of said second data blocks.
4. (Original) The method of Claim 1, wherein the method further includes the step of detaching one or more tablespaces from said second database system, wherein said one or more tablespaces include said second data blocks.
5. (Original) The method of Claim 1, wherein each data block of said copy of said second data blocks has said second data block size.
6. (Canceled)
7. (Canceled)

8. (Original) The method of Claim 1, wherein said first database system is a data warehouse and said second database system is a source database system for said data warehouse.
9. (Original) The method of Claim 8, further including the step of integrating said copy of said second data blocks within said data warehouse as a tablespace that includes said copy of said second data blocks.
10. (Canceled)
11. (Canceled)
12. (Previously Presented) The method of Claim 1, wherein said first database system includes a buffer cache in which said first database system stores data blocks of multiple sizes; and

wherein said method further includes the step of concurrently storing said first data blocks and said second data blocks in said buffer cache.
13. (Currently Amended) A computer-readable medium carrying one or more sequences of instructions for database systems to access data from other database systems, wherein execution of the one or more sequences of instructions by one or more processors causes the one or more processors to perform the steps of:

a first database system directly storing first database records in first data blocks having a first data block size;

concurrently with said first database system directly storing first database records in first data blocks having a first data block size, said first database system directly accessing a copy of second data blocks in which a second database system directly stored second database records;

said second data blocks having at least one data block with a second data block size different than said first data block size; and

wherein each block of said first data blocks and of said second data blocks is an atomic unit of storage space allocated within a file to store one or more records of a database;

the first database system generating metadata that specifies a plurality of block sizes for data blocks directly accessible to said first database system;

wherein said metadata defines tablespaces and specifies for each tablespace of said tablespaces a particular data block size for data blocks in said tablespace;

integrating said copy of said second data blocks within said first database system as at least one tablespace that includes said copy of said second data blocks; and

wherein the step of integrating includes modifying said metadata to reflect said second data block size for said at least one tablespace.

14. (Canceled)
15. (Original) The computer-readable medium of Claim 13, wherein the step of accessing a copy of second data blocks includes storing user data in said copy of said second data blocks.
16. (Original) The computer-readable medium of Claim 13, wherein the computer-readable medium further includes instructions for performing the step of detaching one or more tablespaces from said second database system, wherein said one or more tablespaces include said second data blocks.

17. (Original) The computer-readable medium of Claim 13, wherein each data block of said copy of said second data blocks has said second data block size.
18. (Canceled)
19. (Canceled)
20. (Original) The computer-readable medium of Claim 13, wherein said first database system is a data warehouse and said second database system is a source database system for said data warehouse.
21. (Original) The computer-readable medium of Claim 20, further including instructions for performing the step of integrating said copy of said second data blocks within said data warehouse as a tablespace that includes said copy of said second data blocks.
22. (Canceled)
23. (Canceled)
24. (Previously Presented) The computer-readable medium of Claim 13,
wherein said first database system includes a buffer cache in which said first database system stores data blocks of multiple sizes; and
wherein said computer-readable medium further includes the step of concurrently storing said first data blocks and said second data blocks in said buffer cache.
25. (Canceled)
26. (Canceled)
27. (Previously Presented) The method of Claim 12,
wherein said buffer cache comprises first buffers for storing buffers of said first data block size and second buffers for storing buffers of said second data block size; and

wherein said first buffers are of a different size than said second buffers.

28. (New) The computer-readable medium of Claim 24,
wherein said buffer cache comprises first buffers for storing buffers of said first data
block size and second buffers for storing buffers of said second data block size; and
wherein said first buffers are of a different size than said second buffers.

2. The following is an examiner's statement of reasons for allowance:

The present invention is directed to a method for a given database system to concurrently access data blocks from another database system, where the data blocks from the given database system and data blocks from the other database system have different sizes. The data blocks in the other database system are contained in a tablespace. The tablespace is detached from the other database system and integrated into the given database, which is capable of processing data stored in data blocks of different sizes.

Claims 1, 13 identify the uniquely distinct step of:

the first database system generating metadata that specifies a plurality of
block sizes for data blocks directly accessible to said first database system;
wherein said metadata defines tablespaces and specifies for each
tablespace of said tablespaces a particular data block size for data blocks in said
tablespace;
integrating said copy of said second data blocks within said first database
system as at least one tablespace that includes said copy of said second data
blocks; and

wherein the step of integrating includes modifying said metadata to reflect said second data block size for said at least one tablespace.

In contrast, the closest prior arts, Tamer et al. (US Patent 6,035,412) discloses a substantially similar method that includes the steps of defining a first map of the first set of storage volumes, defining a second map of the second set of storage volumes, and using the first and second maps to identify which portions of the second set of storage volumes need to be refreshed from the first set of storage volumes needs to be achieve resynchronization, but does not teach the two set of storage volumes are different as recited in the claim. Wong et al. (US Patent 5,819,298) suggests method of creating a file allocation table file system with different block sizes. However, Tamer and Wong fail to anticipate or render the above-cited limitations obvious.

Thus, prior art of record neither renders obvious nor anticipates the combination of claim elements in light of the specification.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

Conclusion

3. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Miranda Le whose telephone number is (571) 272-4112. The examiner can normally be reached on Monday through Friday from 8:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jean Homere, Esq., can be reached on (571) 272-3780. The fax number to this Art Unit is 571-273-8300.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 305-3900.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Miranda Le
December 22, 2005



